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# Technical analysis of the first biennial update report of Togo submitted on 27 September 2017

## Summary report by the team of technical experts

*Summary*

According to decision 2/CP.17, paragraph 41(a), Parties not included in Annex I to the Convention (non-Annex I Parties), consistently with their capabilities and the level of support provided for reporting, were to submit their first biennial update report (BUR) by December 2014. Further, paragraph 41(f) of that decision states that non-Annex I Parties shall submit a BUR every two years, either as a summary of parts of their national communication in the year in which the national communication is submitted or as a stand-alone update report. As mandated, the least developed country Parties and small island developing States may submit BURs at their discretion. This summary report presents the results of the technical analysis of the first BUR of Togo conducted by a team of technical experts in accordance with the modalities and procedures contained in the annex to decision 20/CP.19.

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## Abbreviations and acronyms

| | |
|---|---|
| 2006 IPCC Guidelines | *2006 IPCC Guidelines for National Greenhouse Gas Inventories* |
| AD | activity data |
| AFOLU | agriculture, forestry and other land use |
| BUR | biennial update report |
| CGE | Consultative Group of Experts on National Communications from Parties not included in Annex I to the Convention |
| $CH_4$ | methane |
| $CO_2$ | carbon dioxide |
| $CO_2$ eq | carbon dioxide equivalent |
| COP | Conference of the Parties |
| DNA | designated national authority |
| EF | emission factor |
| EMEP/EEA | European Monitoring and Evaluation Programme/European Environment Agency |
| Gg | gigagram |
| GHG | greenhouse gas |
| GWP | global warming potential |
| HFC | hydrofluorocarbon |
| ICA | international consultation and analysis |
| INDC | intended nationally determined contribution |
| IPCC | Intergovernmental Panel on Climate Change |
| IPCC good practice guidance | *Good Practice Guidance and Uncertainty Management in National Greenhouse Gas Inventories* |
| IPCC good practice guidance for LULUCF | *Good Practice Guidance for Land Use, Land-Use Change and Forestry* |
| IPPU | industrial processes and product use |
| LUCF | land-use change and forestry |
| LULUCF | land use, land-use change and forestry |
| MRV | measurement, reporting and verification |
| $N_2O$ | nitrous oxide |
| NA | not applicable |
| NC | national communication |
| NE | not estimated |
| NIR | national inventory report |
| NO | not occurring |
| NOx | nitrogen oxides |
| non-Annex I Parties | Parties not included in Annex I to the Convention |
| NMVOC | non-methane volatile organic compound |
| PFC | perfluorocarbon |
| PoA | programme of activities |
| QA/QC | quality assurance/quality control |
| Revised 1996 IPCC Guidelines | *Revised 1996 IPCC Guidelines for National Greenhouse Gas Inventories* |
| $SF_6$ | sulfur hexafluoride |
| SOx | sulfur oxides |
| UNFCCC reporting guidelines on BURs | "UNFCCC biennial update reporting guidelines for Parties not included in Annex I to the Convention" |
| t | tonne |
| TTE | team of technical experts |

# I. Introduction and process overview

## A. Introduction

1. The process of ICA consists of two steps: a technical analysis of the submitted BUR and a facilitative sharing of views under the Subsidiary Body for Implementation, resulting in a summary report and record, respectively.

2. According to decision 2/CP.17, paragraph 41(a), non-Annex I Parties, consistently with their capabilities and the level of support provided for reporting, were to submit their first BUR by December 2014. In addition, paragraph 41(f) of that decision states that non-Annex I Parties shall submit a BUR every two years, either as a summary of parts of their NC in the year in which the NC is submitted or as a stand-alone update report.

3. Further, according to paragraph 58(a) of the same decision, the first round of ICA is to commence for non-Annex I Parties within six months of the submission of the Parties' first BURs. The frequency of developing country Parties' participation in subsequent rounds of ICA, depending on their respective capabilities and national circumstances, and the special flexibility for small island developing States and the least developed country Parties, will be determined by the frequency of the submission of BURs.

4. This summary report presents the results of the technical analysis of the first BUR of Togo undertaken by a TTE in accordance with the provisions on the composition, modalities and procedures of the TTE under ICA contained in the annex to decision 20/CP.19.

## B. Process overview

5. Togo submitted its first BUR on 27 September 2017. During the technical analysis, Togo attributed the submission of its BUR after the due date of December 2014 to challenges encountered with the timely availability of data for quality control purposes, in particular the GHG emission data.

6. The technical analysis of the BUR took place from 4 to 8 December 2017 in Bonn, Germany, and was undertaken by the following TTE, drawn from the UNFCCC roster of experts on the basis of the criteria defined in decision 20/CP.19, annex, paragraphs 2–6: Mr. Menouer Boughedaoui (former member of the CGE from Algeria), Ms. Marjorie Doudnikoff (France), Mr. Xiang Gao (China), Mr. Ghislain Hippolyte Sabin Guendehou (Benin), Ms. Lisa Hanle (United States of America), Ms. Gherghita Nicodim (Romania) and Mr. Marius Țăranu (Republic of Moldova). Mr. Guendehou and Ms. Nicodim were the co-leads. Ms. Alma Jean, Mr. Sohel Pasha and Mr. Simon Wear (secretariat) coordinated the technical analysis.

7. During the technical analysis, in addition to the written exchange, through the secretariat, to provide technical clarifications on the information reported in the BUR, the TTE and Togo engaged in consultation[1] on the identification of capacity-building needs for the preparation of BURs and participation in the ICA process. Following the technical analysis of Togo's first BUR, the TTE prepared and shared a draft summary report with Togo on 2 March 2018 for its review and comment. Togo, in turn, provided its feedback on the draft summary report on 24 May 2018.

8. The TTE responded to, incorporated the Party's comments referred to in paragraph 7 above, and finalized the summary report in consultation with Togo on 29 May 2018.

[1] The consultation was conducted via videoconferencing.

# II. Technical analysis of the biennial update report

## A. Scope of the technical analysis

9. The scope of the technical analysis is outlined in decision 20/CP.19, annex, paragraph 15, according to which the technical analysis aims to, without engaging in a discussion on the appropriateness of the actions, increase the transparency of mitigation actions and their effects and shall entail the following:

(a) The identification of the extent to which the elements of information listed in paragraph 3(a) of the ICA modalities and guidelines (decision 2/CP.17, annex IV) have been included in the BUR of the Party concerned (see chapter II.B below);

(b) A technical analysis of the information reported in the BUR, specified in the UNFCCC reporting guidelines on BURs (decision 2/CP.17, annex III), and any additional technical information provided by the Party concerned (see chapter II.C below);

(c) The identification, in consultation with the Party concerned, of capacity-building needs related to the facilitation of reporting in accordance with the UNFCCC reporting guidelines on BURs and to participation in ICA in accordance with the ICA modalities and guidelines, taking into account Article 4, paragraph 3, of the Convention (see chapter II.D below).

10. The remainder of this chapter presents the results of each of the three parts of the technical analysis of Togo's BUR outlined in paragraph 9 above.

## B. Extent of information reported

11. The elements of information referred to in paragraph 9(a) above include the national GHG inventory report; information on mitigation actions, including a description of such actions, an analysis of their impacts and the associated methodologies and assumptions, and the progress made in their implementation; information on domestic MRV; and information on support needed and received.

12. According to decision 20/CP.19, annex, paragraph 15(a), in undertaking the technical analysis of the submitted BUR, the TTE is to identify the extent to which the elements of information listed in paragraph 11 above have been included in the BUR of the Party concerned. The TTE considers that the reported information is mostly consistent with the UNFCCC reporting guidelines on BURs. Specific details on the extent of the information reported for each of the required elements are provided in annex I.

## C. Technical analysis of the information reported

13. The technical analysis referred to in paragraph 9(b) above aims to increase the transparency of mitigation actions and their effects, without engaging in a discussion on the appropriateness of those actions. Accordingly, the technical analysis focused on the transparency of the information reported in the BUR.

14. For information reported on national GHG inventories, the technical analysis also focused on the consistency of the methods used for preparing those inventories with the appropriate methods developed by the IPCC and referred to in the UNFCCC reporting guidelines on BURs.

15. The results of the technical analysis are presented in the remainder of this chapter.

### 1. Information on national circumstances and institutional arrangements relevant to the preparation of national communications on a continuous basis

16. As per the scope defined in paragraph 2 of the UNFCCC reporting guidelines on BURs, the BUR should provide an update to the information contained in the most recently submitted NCs, including information on national circumstances and institutional

arrangements relevant to the preparation of NCs on a continuous basis. In their NCs, non-Annex I Parties report on their national circumstances following the reporting guidance contained in decision 17/CP.8, annex, paragraphs 3–5.

17. In accordance with decision 17/CP.8, annex, paragraph 3, Togo reported in its first BUR the following information on national circumstances: a description of national and sectoral governance and its national development priorities, objectives and circumstances, including information on features of geography, demography, climate and economy that may affect its ability to deal with mitigating and adapting to climate change.

18. Togo described in its BUR the existing institutional arrangements relevant to the preparation of its NCs and BURs on a continuous basis. The institutions participating in the preparation of the GHG inventory and mitigation actions are organized by working groups that coordinate the relevant sectors and activities such as energy, IPPU, AFOLU, waste, and data collection. However, information on the institution that has the overall responsibility for NC and BUR preparation, on a continuous basis, was not clearly reported in the BUR.

19. During the technical analysis, the Party clarified the institutional framework for the preparation of the previous NC, and underlined that the Ministry of Environment and Forestry Resources has the overall responsibility for the planning, preparation and management of NCs and BURs. It also clarified the current arrangements for the preparation of the first BUR, which include members of the National Assembly, representatives of the sectoral ministries, the United Nations Development Programme, departments and laboratories of the University of Lomé, the private sector, international organizations and non-governmental organizations. These current arrangements facilitate the activity of sectoral experts; MRV at the national level; and the envisaged arrangements for a sustainable institutional framework for a national inventory system and preparation and continuous updating of NCs and BURs. The Party also provided information on legal instruments that facilitate the implementation of the institutional arrangements identified, mainly the two decrees creating the Steering Committee for National Communications and Biennial Updated Reports on Climate Change and the National Coordinating Authority for the Development of National Communications and Biennial Updated Reports on Climate Change in Togo. The Party informed the TTE that for the implementation of sustainable national arrangements it would need further capacity.

20. The TTE noted that the transparency of the information reported could be further enhanced by including additional information on the institutions involved in preparing NCs and BURs on a continuous basis, which the TTE noted could facilitate a better understanding of the information reported.

21. Togo reported on its domestic MRV system, which is designed at the national level and covers institutional arrangements for the preparation of NCs and BURs on a continuous basis. The Party reported its approach to data collection and archiving, analysis, interpretation and monitoring of the results through indicators. Those activities are undertaken by the Division to Combat Climate Change, which coordinates the activities reported in NCs and BURs and the five working groups responsible for data collection, national circumstances, GHG inventory, mitigation actions and cross-cutting issues; a separate working group is responsible for vulnerability and adaptation. The Party reported that a decree will be issued to facilitate coordination and cooperation between national and private institutions to collect the necessary data and operationalize the MRV system. However, it was not clear how this decree would achieve its objectives. During the technical analysis, Togo clarified that the proposed decree would establish the modalities, procedures and guidelines for the domestic MRV system. Togo also clarified that the study on its cross-cutting MRV system would be used to analyse the current system and propose a new one, enhanced and adapted to the country's situation.

### 2. National greenhouse gas emissions by sources and removals by sinks

22. As indicated in table 1 in annex I, Togo reported information on its GHG inventory in its BUR completely in accordance with paragraphs 3–10 of the UNFCCC reporting guidelines on BURs and paragraphs 8–24 of the "Guidelines for the preparation of national

communications from Parties not included in Annex I to the Convention", contained in the annex to decision 17/CP.8.

23. Togo submitted its first BUR on 27 September 2017 and the GHG inventory reported is for the years 1995–2015, which is consistent with the requirements for the reporting period. The TTE commends Togo for including more recent years in its GHG inventory.

24. Togo submitted an NIR as an annex to its first BUR.

25. GHG emissions and removals for 1995–2015 were estimated using tier 1 methodologies from the 2006 IPCC Guidelines and the IPCC inventory software (version 2.17).[2] Methodologies from the *EMEP/EEA air pollution emission inventory guidebook 2016*[3] were used for compiling estimates for NOx, CO, NMVOCs and SOx.

26. With regard to the methodologies used, information was reported transparently, including the specific methodology and the tier levels and sources of AD used for each category and subcategory.

27. The net anthropogenic GHG emissions for 2015 reported in the BUR were estimated at 28,475.44 Gg $CO_2$ eq, with the AFOLU sector being the main source of emissions. The net emissions for $CO_2$, $CH_4$ and $N_2O$ were reported as 20,869.49 Gg $CO_2$ eq, 1,656.76 Gg $CO_2$ eq and 5,949.19 Gg $CO_2$ eq, respectively, which indicates increases of 72.2, 60.3 and 115.2 per cent, respectively, since 1995.

28. Other emissions reported for 2015 include 22.25 Gg NOx, 1,083.07 Gg CO, 41.57 Gg NMVOCs and 3.78 Gg SOx.

29. Where numerical data were not provided in the BUR, Togo applied notation keys from tables 1 and 2 of the "Guidelines for the preparation of national communications from Parties not included in Annex I to the Convention, as reflected in tables 13 and 14, respectively, of its BUR (based on the sectoral composition of the Revised 1996 IPCC Guidelines). In reporting emission estimates using tables 1 and 2 (this was done only for 2013), in some cases the use of notation keys was not consistent with the Revised 1996 IPCC Guidelines. For instance, in the case of the solvents and other product use sector, for all gases except NMVOCs, the notation key "NA" was applied, but Togo could consider using the notation key "NE" or "NO" for reporting $N_2O$ emissions from that sector.

30. When conducting the technical analysis, the TTE noted discrepancies between the GHG emission estimates in different tables of and annexes to the BUR and the NIR (for instance, between the information provided in the BUR in table 13 and annex 13, or in table 15 and annex 11; and, similarly, between the information provided in table 15 of the BUR and tables 3-26 and 5-41 of the NIR). During the technical analysis, Togo provided revised estimates of its GHG emissions for a range of years (1995–1996, 1998–2000, 2003, 2005, 2009–2010, 2013 and 2015). The TTE commends the Party for its efforts to ensure the transparency of the information reported, but noted further discrepancies in the submitted revised GHG emission estimates that could be addressed by Togo.

31. While the GHG inventory was calculated using the 2006 IPCC Guidelines, comparable information was included using the summary and sectoral reporting tables from the 2006 IPCC Guidelines and reporting tables 1 and 2 from the Revised 1996 IPCC Guidelines, although this was done only for 2013. The use of two sets of reporting tables in the BUR and the NIR presented a challenge to the TTE, as the textual part of those documents refers only to the sectors and categories from the 2006 IPCC Guidelines. The Party could consider continuing to report tables 1 and 2 for comparison purposes, but providing them in a separate annex to the BUR and/or the NIR. In the NIR, Togo also reported comparable information addressing the tables included in annex 3A.2 to the IPCC good practice guidance for LULUCF (see table 5-43 and annex 4).

[2] Available at http://www.ipcc-nggip.iges.or.jp/software/index.html.

[3] Available at https://www.eea.europa.eu/publications/emep-eea-guidebook-2016.

32. According to the information reported in the BUR, the shares of emissions that different sectors contributed to the total GHG emissions, including AFOLU, in 2015 were: energy, 10.5 per cent; IPPU, 2.9 per cent; AFOLU, 86.0 per cent; and waste, 0.6 per cent.

33. GHG emissions in 2015 from the energy sector amounted to 2,991.68 Gg $CO_2$ eq. The main sources of emissions were categories 1.A.3 transport (63.0 per cent of the sectoral total), 1.A.4 other sectors (21.6 per cent), 1.A.2 manufacturing industries and construction (14.9 per cent) and 1.A.1 energy industries (0.5 per cent). The TTE noted some discrepancies between the emission estimates reported for the energy sector provided in different tables of and annexes to the BUR and the NIR. The Party could consider enhancing the efficiency of the implementation of the QA/QC and verification activities, which could minimize errors, ensure better time-series consistency and enhance the accuracy and transparency of the information reported. During the technical analysis, Togo stated that it intends to explore ways to improve data management and enhance QA/QC and verification activities.

34. For the IPPU sector, emissions in 2015 amounted to 814.14 Gg $CO_2$ eq, with information reported only for the source category cement production. During the technical analysis, Togo stated that chemical industry (category 2.B), metal industry (category 2.C) and electronics industry (category 2.E) do not exist in the country and therefore the notation key "NO" was used to report emissions for those categories. Togo used the same notation key to report the emissions from non-energy products from fuels and solvent use (lubricant use, paraffin wax use and solvent use) (category 2.D). During the technical analysis, Togo noted that the use of the notation key "NE" might be more appropriate to report the emissions for category 2.D. The TTE noted that the Party could consider including emission estimates for that category or clarifying the reasons for which they would be reported as "NO" or "NE".

35. Togo reported emissions of HFCs, PFCs and $SF_6$ using the notation key "NE". During the technical analysis, the Party clarified that emissions of those gases were not estimated because of lack of data. The TTE noted that the Party could consider including in its next submission emission estimates for the consumption of HFCs, PFCs and $SF_6$, or further clarifying the reasons for which they are still being reported as "NE". During the technical analysis, Togo informed the TTE of its intention to strengthen the capacity of its National Ozone Unit, which would enhance national capacity to report on such information.

36. For the AFOLU sector, for 2015 Togo reported net GHG emissions of 24,490.92 Gg $CO_2$ eq. The main sources of net emissions at the sectoral level were categories 3.B.1 forest land (71.3 per cent of the sectoral total), 3.C.4 direct $N_2O$ emissions from managed soils (22.5 per cent), 3.A.1 enteric fermentation (3.3 per cent) and 3.C.1 emissions from biomass burning (1.6 per cent), all of them being identified as key categories. Togo used EFs from the 2006 IPCC Guidelines. The categories 3.B.4 wetlands, 3.B.5 settlements, 3.B.6 other land and 3.C.5 indirect $N_2O$ emissions from managed soils were reported as "NE" and category 3.B.2 cropland was reported as "NO", although it would be more appropriate to report it as "NE". The TTE noted that the Party could consider including emission estimates for these categories, or clarifying the reasons why they were reported as "NO" or "NE".

37. For the waste sector, in its BUR Togo reported emissions of 178.70 Gg $CO_2$ eq for 2015. The main sources of emissions at the sectoral level were categories 4.D wastewater treatment and discharge (43.3 per cent of the sectoral total), 4.A solid waste disposal (42.1 per cent) and 4.C incineration and open burning of waste (14.5 per cent), with $CH_4$ from wastewater handling being a key category following the trend assessment.

38. Togo included in its BUR an NIR containing an update of the GHG inventory found in its NC3, which addressed anthropogenic emissions and removals for 2010 only. The update was carried out for all years in the period 1995–2010 using the methodologies contained in the 2006 IPCC Guidelines, while the anthropogenic emissions and removals for 2011–2015 were estimated for the first time, thus generating a consistent 21-year time series. The previous national GHG inventory, reported in the NC3, was prepared using the Revised 1996 IPCC Guidelines, the IPCC good practice guidance and the IPCC good

practice guidance for LULUCF. The TTE commends the Party for the use of the 2006 IPCC Guidelines, which are considered to provide more recent methodologies.

39. Togo described in its BUR and NIR the institutional framework for the preparation of its GHG inventory for 1995–2015. The Ministry of Environment and Forest Resources, through its Directorate for the Environment, is the governmental body responsible for climate change policies and is also responsible for the Party's GHG inventory, which has been prepared with the support of the United Nations Development Programme, which assisted Togo in designing its GHG inventory system. The Directorate has put in place a broader framework, integrating the national network of research institutions, relevant experts and the holders of national databases. Togo also outlined the institutions responsible for compiling the GHG inventory for the different sectors, including their individual roles.

40. Togo reported in its NIR a key category analysis performed for the level of emissions for 1995 and for the trend in emissions between 1995 and 2013. During the technical analysis, the Party provided the results of the key category analysis for the level of emissions and for the trend in emissions for the whole period 1995–2015, with and without the contribution of the LULUCF sector. The TTE commends the Party for providing information in accordance with the IPCC good practice guidance, but noted multiple inconsistencies in the resubmitted key category analysis tables as compared with the data reported in the BUR and the NIR. Togo could consider further review of those key category analysis tables, which would improve consistency between the BUR and the NIR.

41. The BUR and the NIR also provide information on the QA/QC measures implemented for all sectors. The Party could consider enhancing the existing QA/QC and verification activities, which would minimize errors and enhance the accuracy and transparency of the information reported.

42. Togo reported information on $CO_2$ fuel combustion using both the sectoral and the reference approach; however, this was done only for 2013. As reported in the BUR, the difference between the reference approach (2,347.85 Gg) and the sectoral approach (2,089.27 Gg) is 257.728 Gg or 10.98 per cent; however, the TTE observed the difference as being 258.574 Gg or 12.38 per cent. The Party explained that the large difference between the two approaches was due to the statistical data used.

43. Information on international aviation and marine bunker fuels was reported by Togo using the notation key "NE". During the technical analysis, the Party stated that information on international aviation and marine bunkers was considered confidential and, as such, was not reported in the BUR. However, in annex 1 to the BUR and annex 7 to the NIR, the Party reported under category 1.A.3.a.i international aviation AD on jet kerosene consumption for 1995–2015. The Party could consider including information in the BUR on such emissions.

44. Togo reported information on the level of uncertainty associated with its national GHG inventory, but only for 2013. The uncertainty analysis is based on approach 1 from the 2006 IPCC Guidelines and covers all categories and all direct GHGs. The results obtained, as reported in the BUR, revealed that the level of uncertainty for emissions is 17.05 per cent (including AFOLU) and the trend uncertainty is 38.29 per cent (including AFOLU). The TTE commends Togo for providing in its BUR detailed information on the selected uncertainty values for AD and EFs and the reasons for their selection.

45. The TTE noted that the transparency of the information reported could be further enhanced by addressing in subsequent BURs the areas indicated in paragraphs 29–44 above, which the TTE noted could facilitate a better understanding of the information reported.

### 3. Mitigation actions and their effects, including associated methodologies and assumptions

46. As indicated in table 2 in annex I, Togo reported in its BUR, mostly in accordance with paragraphs 11–13 of the UNFCCC reporting guidelines on BURs, information on mitigation actions and their effects, to the extent possible.

47. The information reported provides an overview of the Party's mitigation actions and their effects. In its BUR, Togo frames its national mitigation planning and actions in the context of its INDC. It aims to reduce GHG emissions by 31.1 per cent by 2030, but did not report any further information. During the technical analysis, Togo stated that it expects to reduce its emissions by 11.1 per cent by 2030 with its existing measures compared with a 'without measures' scenario, and that it would aim for an additional 20 per cent reduction, conditional upon international support. The Party also reported that it had conducted mitigation studies that enabled it to identify mitigation options. In the BUR, Togo presented mitigation actions as implemented, currently implemented and planned. Most of the mitigation actions are in the energy and AFOLU sectors. It also presented sectoral projections that include the envisaged mitigation options. Those mitigation options were selected on the basis of a multi-criteria assessment, taking into account emission reductions, financial requirements, consistency with national development goals, the availability of technology and capacity, and other co-benefits.

48. The TTE noted that the mitigation options considered in the sectoral projections were not included in the tables describing the Party's mitigation actions (tables 26, 30, 31 and 32 of the BUR), while the mitigation actions described in those tables were not mentioned in the description of the sectoral projections. During the technical analysis, Togo stated that the mitigation options included in its projections were envisaged long-term actions and that there is no linkage between the long-term actions envisaged in the projections and the mitigation actions described in the tables that were already implemented, current and short-term planned actions.

49. The Party reported a summary of its mitigation actions in tabular format. Consistent with decision 2/CP.17, annex III, paragraph 12(a), Togo reported the names and coverage of its mitigation actions. A description of the mitigation actions was also reported in the BUR; however, the Party did not include information on the nature of the action, nor the progress indicators. Quantitative goals were provided for some mitigation actions. During the technical analysis, Togo stated that most of its mitigation actions were considered as co-benefits of development programmes and projects implemented to address poverty, sustainable development and economic growth. Since its programmes and projects were not designed specifically for climate change mitigation, the Party encountered difficulties in reporting information on the nature of actions, quantitative goals and progress indicators, as outlined in the relevant reporting provisions. Togo also reported information on the costs of most of its mitigation actions. The TTE commends the Party for reporting such information.

50. In the BUR, the Party described its mitigation actions, including some of the steps taken or envisaged to achieve those actions. However, for all mitigation actions the information provided does not clearly distinguish between steps taken and envisaged. During the technical analysis, Togo stated that evaluation documents from the different institutions relating to the implemented and ongoing programmes and projects were not available. It reported in the BUR information on the status of implementation and the start and end years of implementation of all its mitigation actions. However, it did not report information on progress and the underlying steps taken or envisaged. Togo stated during the technical analysis that it had reported only available and verifiable information recorded for the programmes and projects it had identified, and specified that it needs capacity-building for applying the tools for evaluating the implementation of its programmes and projects.

51. Mitigation actions were reported for the energy sector and those actions envisaged in the projections. The mitigation options considered in the projections would result in an emission reduction of 8.1 per cent by 2030 compared with a 'business as usual' scenario. Information on the methodologies and underlying assumptions used was provided for those projections but not for the mitigation actions. For the projections in the energy sector, the Party reported that it used the Long-range Energy Alternatives Planning system. The mitigation actions are in the areas of improving energy efficiency and promoting renewable energy sources (solar energy and hydroelectricity). The objectives of the mitigation actions were clearly reported. The Party reported on 12 mitigation measures derived from projects

that had been implemented, were ongoing or were planned, most of them in solar energy (six actions).

52. Togo reported emission reduction estimates for most actions in the energy sector, but the TTE noted that those estimates were not reported consistently. For three actions, an annual emission reduction estimate was provided (with a total estimated reduction of 115.2 Gg $CO_2$ eq per year); for two actions, it was provided over a 10-year period (with a total estimated reduction of 185.25 Gg $CO_2$ eq); for seven actions, the Party provided an estimate without indicating for which year or period (with a total estimated reduction of 834.9 Gg $CO_2$ eq); and for three actions it did not estimate emission reductions. During the technical analysis, Togo stated that its experts experienced technical and time constraints in estimating emission reductions appropriately, and mentioned the need for appropriate training to conduct such estimates and the tools to facilitate reporting information on the results achieved.

53. Mitigation actions were reported for the AFOLU sector and those actions envisaged in the projections. The mitigation options considered in the projections would result in a reduction of 45.2 per cent for livestock emissions by 2030 compared with a 'business as usual' scenario, and a 48.6 per cent reduction in agricultural soils emissions. For the forestry and other land-use sector, the mitigation options considered would result in an increase of 15 per cent in the carbon stock compared with a 'business as usual' scenario. Information on the methodologies and underlying assumptions used was provided for the projections but not for the mitigation actions. For the projections for the AFOLU sector, the Party reported that it had used a spreadsheet and hypotheses based on expert judgment for the agriculture sector, and the comprehensive mitigation assessment process for the forestry and other land-use sector. The Party also reported 20 mitigation actions that had been implemented or were ongoing or planned, most of them related to forestry activities (13 actions), such as reforestation and forest management. Togo reported emission reduction estimates for eight mitigation actions, however the TTE noted that those estimates were not reported consistently: for one action, an annual emission reduction estimate was provided (290 Gg $CO_2$ eq per year) and for seven actions the Party provided an estimate without specifying for which year or period (for a total estimated reduction of 442,307.9 Gg $CO_2$ eq). These last actions entail a reforestation programme for classified forests, sustainable management of vulnerable forests, the promotion of agroforestry, reforestation of untilled lands and degraded areas, as well as a programme of protection of stream banks.

54. Four mitigation actions were reported for the IPPU sector and those actions envisaged in the projections. Depending on the option considered, an emission reduction of between 5 and 50 per cent was projected compared with a 'business as usual' scenario. Information on the methodologies and underlying assumptions used was provided for the projections but not for the mitigation actions. For the projections, the Party reported that it had used a spreadsheet for clinker production, as this was the only source of emissions from the sector. The Party also reported that it had not estimated the emission reduction for its mitigation actions in the IPPU sector. The mitigation actions reported were in the area of improving clinker production processes, and the Party reported that it needs financial support to implement those actions from 2018 onward.

55. Mitigation actions were reported for the waste sector and those actions envisaged in the projections. The BUR presents three projections but does not include the 'business as usual' scenario. During the technical analysis, the Party provided a document containing such information. Depending on the option considered, an emission reduction of between 2 and 18 per cent was projected compared with a 'business as usual' scenario. Information on the methodologies and underlying assumptions used was provided for the projections but not for the mitigation options. For the projections, the Party reported that it had used a spreadsheet to perform the calculations, on the basis of the principles of the waste reduction model. The Party reported two ongoing mitigation measures: the installation of biodigesters in 2016–2017, allowing the biological treatment of 400 t waste and a production of 20,000 $m^3$ biogas annually, for an estimated emission reduction of 0.05 Gg $CO_2$ eq per year. Since 2010, the Party has been biologically treating 4,000 t waste per year, but it did not provide a corresponding emission reduction estimate.

56. Togo provided information on its involvement in international market mechanisms as a Party to the Kyoto Protocol. It has documented two PoAs related to the distribution of improved stoves, registered in June and September 2013. One is a regional PoA for West Africa, with a component project activity in Togo, and the other is national. The first one has certified emission reductions issued of 89,006 t $CO_2$ eq. The BUR does not include information on the quantity of certified emission reductions issued for the second PoA. During the technical analysis, the Party stated that it had not included that information and provided an emission reduction estimate of 96,000 t $CO_2$ eq for the PoA. The Party also mentioned during the technical analysis that it needs to enhance the institutional and expert capacity of its DNA.

57. The TTE noted that the transparency of the information reported could be further enhanced by addressing in subsequent BURs the areas indicated by the TTE in paragraphs 48–56 above, which the TTE noted could facilitate a better understanding of the information reported.

### 4. Constraints and gaps, and related technology, financial, technical and capacity-building needs, including a description of support needed and received

58. As indicated in table 3 in annex I, Togo reported in its BUR, mostly in accordance with paragraphs 14–16 of the UNFCCC reporting guidelines on BURs, information on finance, technology and capacity-building needs and support received.

59. In its BUR, Togo reported information on constraints, gaps and needs in relation to its ambition to respond to the effects of climate change through mitigation and its capacity to adapt. Constraints and gaps, which were identified for different sectors in tables 35 and 36 of the BUR, were described in detail.

60. Togo reported information on the support it needs for capacity-building for the period 2018–2030: its overall and additional needs amount to USD 204,000 and USD 52,000, respectively. The latter amount would be used to enhance the capacity to apply the 2006 IPCC reporting methodologies, evaluate the effect of mitigation actions and raise the awareness of the public and private sectors. Technical support needed for the same period was reported in the amount of USD 2.922 million, while the financial requirement was approximately USD 203 million. The TTE commends Togo for reporting extensive information on its needs, gaps and constraints. During the technical analysis, the Party informed the TTE that the needs were identified on the basis of a questionnaire sent to focal points and responsible institutions involved in climate change and different sectoral and thematic studies. The constraints are related to the collection, collation, classification, documentation and archiving of information on the implementation of activities, measures and programmes that have multiple uses or climate change co-benefits. Regarding the financial support required to address its capacity-building and technical needs, Togo stated that information was collected from several documents relating to programmes and projects. However, this was not possible for some areas, which will be reported in a subsequent report.

61. Further, the Party submitted an additional document that clearly outlines constraints and gaps related to the GHG inventory and mitigation analyses in the energy, IPPU, AFOLU and waste sectors. They include lack of financial and technological resources, insufficient institutional arrangements and lack of consistent data for estimating GHG emissions and emission reductions for mitigation actions. The main need identified is financial resources for technology transfer. These were evaluated over a period of 10 years and amount to nearly USD 4 billion.

62. For the period 2018–2030, the Party reported that the support already received for capacity-building and other financial support amounted to approximately USD 82,000 and USD 5 million, respectively. Togo reported that it had received support of USD 352,000 to facilitate the preparation of its first BUR, but that the funds had been insufficient. The information provided shows that from 2013 to the current period, over USD 40 million was received for projects, participation in conferences and preparation of NCs, among others. Furthermore, financial support received through pledges and loans exceeded USD 250 million. The information on technology support received from various sources was not very

clearly reported in the BUR. During the technical analysis, Togo stated that it had encountered problems in estimating the technical support received owing to time constraints. The TTE noted that reporting this information in the BUR could enable the TTE to better understand the information reported. Activities under international technical cooperation programmes, implemented in collaboration with the United Nations Environment Programme, the UNFCCC secretariat and other agencies, contributed to the preparation of the BUR. The TTE commends Togo for reporting those activities.

63. Togo did not report on its technology needs. During the technical analysis, it clarified that this was due to a study being in progress during the preparation period of the BUR. In general, technology transfer was reported as not estimated from different sources (the Global Environment Facility, the Green Climate Fund, Parties included in Annex II to the Convention and developed country Parties, and multilateral sources). However, technology transfer was reported as having been received from Parties included in Annex II to the Convention and developed country Parties (through the Climate Technology Centre and Network) in the form of subventions, concessional loans and non-concessional loans, and as consisting of tools for estimating the mitigation contribution and assessing risks from climate change.

### 5. Any other information

64. Togo reported on its national adaptation plan, which was elaborated in November 2016. Adaptation to the effects of climate change and sustainable development are a priority for Togo. The implementation of adaptation actions will result in mitigation co-benefits and may lead to reductions in GHG emissions that were not estimated by the Party. The sectors identified in the plan were prioritized in descending order as follows: (1) agriculture; (2) water resources; (3) coastal erosion; (4) human settlements and health; (5) LULUCF; and (6) energy.

## D. Identification of capacity-building needs

65. In consultation with Togo, the TTE identified the following capacity-building needs related to the facilitation of the preparation of subsequent BURs and participation in ICA:

(a) Capacity-building needs related to GHG inventories:

(i) Enhance the capacity of national sectoral experts from relevant institutions through refresher courses on the use of the UNFCCC reporting guidelines on BURs and IPCC and EMEP/EEA guidelines for calculating estimates of GHG emissions and removals on a sector-by-sector basis, including cross-cutting issues (e.g. uncertainty assessments) and on data compilation, management and maintenance and archiving of databases, with good practices in knowledge management of GHG data;

(ii) Strengthen the capacity of national sectoral experts from relevant institutions to improve methodologies and procedures for gathering relevant AD on consumption of international aviation and marine bunker fuels;

(iii) Train the national inventory team on tools for GHG inventories, in particular the inventory software of the 2006 IPCC Guidelines, CGE training materials and relevant UNFCCC decisions;

(iv) Continuously train GHG experts, especially new experts at the national and international level;

(v) Enhance the capacity of the national network of research institutions to conduct studies, research and assessments, focusing on improving the system for data collection needed for the development of the GHG inventory, and developing data management and archiving systems and country-specific EFs for relevant sectors (e.g. energy, IPPU and AFOLU), including with the purpose of moving to higher-tier estimation methodologies in the case of the most relevant key categories;

(vi) Enhance the efficiency of the implementation of the QA/QC plan and QA/QC verification activities to minimize errors, ensure better time-series consistency and enhance the accuracy and transparency of the reporting;

(vii) Enhance the national capacity of experts to develop the GHG inventory for the AFOLU sector, including the development of a land-use matrix in accordance with the requirements set out in the 2006 IPCC Guidelines (the land-use matrix might be based on information generated by a nationwide forest inventory, complemented by a complete inventory of land use of all areas, or alternatively based on data acquired through remote sensing techniques and facilitated access to the latest satellite data of land use and land-use mapping);

(viii) Strengthen the capacity of the National Ozone Unit to achieve more accurate data collection and improve methodologies and procedures for gathering relevant AD on emissions of fluorinated gases (e.g. collecting AD from companies that import, use, dispose of, recover and recycle refrigerants and refrigerant equipment in Togo);

(b) Capacity-building needs related to mitigation actions and their effects:

(i) Enhance the capacity of experts to estimate quantitative emission reduction co-benefits from the programmes and projects, apply methodologies and assumptions for mitigation actions and report them, apply the relevant tools for assessing the implementation of mitigation actions, and report the progress of implementation and the results achieved;

(ii) Enhance the capacity of national experts to develop a low-carbon development strategy;

(iii) Enhance institutional and expert capacity (such as of the DNA) to document and report on international market mechanisms;

(iv) Enhance the implementation of the domestic MRV system for mitigation actions and the capacity of institutions for data collection, storage and update:

a. To raise the awareness of institutions so that they mainstream climate change considerations in programme and project development;

b. To build the capacity of all stakeholders on progress indicators;

c. To establish a collaborative framework between the different institutions to facilitate access to information on the progress of implementation of mitigation-related programmes and projects;

(c) Capacity-building needs relating to cross-cutting issues:

(i) Enhance the technical capacity of national experts from the relevant institutions in the preparation of NCs and BURs to facilitate reporting on a continuous basis;

(ii) Enhance the capacity of the relevant experts to design and implement the relevant institutional arrangements to facilitate the preparation of NCs and BURs on a continuous basis, including approaches to sensitize decision makers;

(d) Capacity-building in relation to needs and support:

(i) Enhance the capacity of staff and national experts to identify and implement the most appropriate tools for assessing and overcoming gaps and constraints (including constraints related to the collection, collation, classification, documentation and archiving of information on the implementation of activities, measures and programmes that have multiple uses or climate change co-benefits);

(ii) Enhance national capacity to implement the domestic MRV system;

(iii) Enhance national capacity to establish a collaborative framework to facilitate better coordination between public and private institutions and civil society

organizations to enable the collection and documentation of information on their needs;

(iv) Enhance national capacity to establish a collaborative framework so as to facilitate the implementation of a study on technology needs and enable the reporting of information on the technology needs determined at the national level.

66. The TTE noted that, in addition to those identified during the technical analysis, Togo reported detailed gaps and constraints in tables 35 and 36 of the BUR, which it would be able to overcome with the associated capacity-building.

# III. Conclusions

67. The TTE conducted a technical analysis of the information reported in the first BUR of Togo in accordance with the UNFCCC reporting guidelines on BURs. The TTE concludes that the reported information is mostly consistent with the UNFCCC reporting guidelines on BURs and provides an overview of: the national circumstances and institutional arrangements relevant to the preparation of NCs on a continuous basis; the national inventory of anthropogenic emissions by sources and removal by sinks of all GHGs not controlled by the Montreal Protocol, including an NIR; mitigation actions and their effects, including associated methodologies and assumptions; constraints and gaps and related financial, technical and capacity-building needs, including a description of the support needed and received; the level of support received to enable the preparation and submission of BURs; and domestic MRV. During the technical analysis, additional information was provided by Togo on the elements above. The TTE concluded that the information analysed is mostly transparent.

68. The Party reported information on the institutional arrangements relevant to the preparation of BURs. Togo described the existing institutional arrangements relevant to the preparation of its NCs and BURs on a continuous basis. The description covers aspects related to the institutions participating in the preparation of the GHG inventory for the BUR and the elaboration of the previous NC. The Ministry of Environment and Forestry Resources facilitates the collecting of information and data relevant for the sectoral activity of the technical working groups, while the National Institute for Statistics and Economic and Demographic Studies is responsible for data collection for the GHG inventory. The current institutional arrangements could be improved in a sustainable manner by enhancing capacity-building to implement the inputs from various studies. The TTE commends Togo for its actions and notes that the planned improvement of the overall MRV system of GHG emissions and reductions, as outlined during the technical analysis, would contribute to achieving sustainable reporting.

69. In its first BUR, submitted in 2017, Togo reported information on its national GHG inventory for the years 1995–2015. This included GHG emissions and removals of $CO_2$, $CH_4$ and $N_2O$ for all relevant sources and sinks as well as the precursor gases. Estimates of fluorinated gases were not provided owing to difficulties in obtaining the necessary data. The inventory was developed on the basis of the 2006 IPCC Guidelines. The total GHG emissions for 2015 were reported as 28,475.42 $CO_2$ eq (including AFOLU). Nine key categories by level and 11 key categories by trend with LULUCF and 11 key categories by level and 13 key categories by trend without LULUCF were identified, with $CO_2$ and category 3.B.1 forest land identified as the main gas and key category, respectively.

70. Togo reported information on mitigation actions and their effects, including the mitigation goal of a 31.1 per cent emission reduction by 2030 compared to the "business-as-usual" scenario, as stated in its INDC. The mitigation actions were categorized in the context of sectors. GHG emission reductions of 405.25 Gg $CO_2$ eq per year were reported for 5 mitigation actions; reductions of 185.25 Gg $CO_2$ eq for a 10-year period were reported for 2 actions; reductions of 44,3142.8 Gg $CO_2$ eq were reported for 11 actions (without information on the applicable year or period); and the emission reductions for 20 actions were not estimated. Mitigation actions were reported for the energy sector, focusing on areas of improving energy efficiency and promoting renewable energy sources (solar energy and hydroelectricity). For the AFOLU sector, the mitigation actions focused on

forestry activities. Mitigation actions reported for the IPPU focused on improving clinker production processes, while those for waste focused on the installation of biodigesters and production of biogas.

71. Togo reported information on key constraints, gaps and related needs. In tables 35 and 36 of the BUR, information referring to the gaps in and constraints on each sector was included. The needs include areas of the GHG inventory, mitigation and adaptation actions and cross-cutting issues in the energy, IPPU, AFOLU and waste sectors. During the technical analysis, Togo provided additional information on key challenges and needs, such as designing and implementing a systematic methodology for identifying constraints, gaps and needs, and translating the needs identified into financial, technical, technological and capacity-building needs. Information on support received was related to the development of the BUR and information was reported on support needed to enhance capacity-building, technical and financial support needed for mitigation actions (e.g. accessing renewable energy technologies). Information on technology needs was not reported in the BUR but information on technology received was reported.

72. The TTE, in consultation with Togo, identified 21 capacity-building needs in four main clusters that aim to facilitate reporting in accordance with the UNFCCC reporting guidelines on BURs and participation in ICA in accordance with the ICA modalities and guidelines, taking into account Article 4, paragraph 3, of the Convention. Togo categorized all the capacity-building needs listed in paragraph 65 above into short-term (January-May 2018), medium-term (June 2018 to August 2019) and long-term (September 2019 to September 2022) categories, with high, medium and low priority. It further identified the following as priority capacity-building needs:

(a) Regarding the capacity-building needs related to GHG inventories, all the needs listed in paragraph 65 above are identified as being of high priority in the short and medium-term;

(b) Regarding the capacity-building needs related to mitigation actions and their effects, they were prioritized as follows:

(i) High priority in the short and medium-term:

a. Enhance the capacity of experts to estimate quantitative emission reduction co-benefits of programmes and projects; apply methodologies and assumptions for mitigation actions and report them; apply the relevant tools for assessing the implementation of mitigation actions; and report on progress of implementation and the results achieved;

b. Enhance the capacity of national experts to develop a low-carbon development strategy;

c. Enhance the implementation of the domestic MRV system for mitigation actions and the capacity of institutions for data collection, storage and update;

d. Raise the awareness of institutions so that they mainstream climate change considerations in programme and project development;

e. Establish a collaborative framework between the different institutions to facilitate access to information on the progress of implementation of mitigation-related programmes and projects;

(ii) Medium priority in the medium-term:

a. Enhance institutional and expert capacity (such as of the DNA) to document and report on international market mechanisms;

b. Build the capacity of all stakeholders on progress indicators;

(c) Regarding the capacity-building needs relating to cross-cutting issues:

(i) High priority in the short-term:

Enhance the capacity of the relevant experts to design and implement the relevant institutional arrangements to facilitate the preparation of NCs and BURs on a continuous basis, including approaches to sensitize decision makers;

(ii) Medium priority in the short, medium and long-term:

Enhance the technical capacity of national experts from the relevant institutions in the preparation of NCs and BURs to facilitate reporting on a continuous basis;

(d) Regarding capacity-building in relation to needs and support:

(i) High priority in the short and medium-term:

a. Enhance the capacity of staff and national experts to identify and implement the most appropriate tools for assessing and overcoming gaps and constraints (including constraints related to the collection, collation, classification, documentation and archiving of information on the implementation of activities, measures and programmes that have multiple uses or climate change co-benefits);

b. Enhance the national capacity to implement the domestic MRV system;

c. Enhance the national capacity to establish a collaborative framework to facilitate better coordination between public and private institutions and civil society organizations to enable the collection and documentation of information regarding their needs:

(ii) Medium priority in the medium-term:

Enhance national capacity to establish a collaborative framework so as to facilitate the implementation of a study on technology needs and enable reporting on the technology needs determined at the national level.

# Annex I

## Extent of the information reported by Togo in its first biennial update report

Table 1
**Identification of the extent to which the elements of information on greenhouse gases are included in the first biennial update report of Togo**

| *Decision* | *Provision of the reporting guidelines* | *Yes/partly/no/ NA* | *Comments on the extent of the information provided* |
|---|---|---|---|
| Decision 2/CP.17, paragraph 41(g) | The first BUR shall cover, at a minimum, the inventory for the calendar year no more than four years prior to the date of the submission, or more recent years if information is available, and subsequent BURs shall cover a calendar year that does not precede the submission date by more than four years. | Yes | Togo submitted its first BUR on 27 September 2017; the GHG inventory reported is for 1995–2015. |
| Decision 2/CP.17, annex III, paragraph 4 | Non-Annex I Parties should use the methodologies established by the latest UNFCCC guidelines for the preparation of NCs from non-Annex I Parties approved by the COP or those determined by any future decision of the COP on this matter. | Yes | Togo used the 2006 IPCC Guidelines to estimate direct GHG emissions and the *EMEP/EEA air pollutant emissions inventory guidebook 2016* to estimate ozone and aerosol precursor emissions. |
| Decision 2/CP.17, annex III, paragraph 5 | The updates of the sections on the national inventories of anthropogenic emissions by sources and removals by sinks of all GHGs not controlled by the Montreal Protocol should contain updated data on activity levels based on the best information available using the Revised 1996 IPCC Guidelines, the IPCC good practice guidance and the IPCC good practice guidance for LULUCF; any change to the EF may be made in the subsequent full NC. | Yes | The information was reported in the BUR, as well as in the NIR, which was submitted as a technical annex to the BUR. |
| Decision 2/CP.17, annex III, paragraph 6 | Non-Annex I Parties are encouraged to include, as appropriate and to the extent that capacities permit, in the inventory section of the BUR: | Yes | |
| | (a) Tables included in annex 3A.2 to the IPCC good practice guidance for LULUCF; | Yes | Comparable information addressing to some extent the tables included in annex 3A.2 to the IPCC good practice guidance for LULUCF was reported in the NIR (see table 5-43 and annex 4). |
| | (b) The sectoral report tables annexed to the Revised 1996 IPCC Guidelines. | Yes | The sectoral report tables annexed to the Revised 1996 IPCC Guidelines were used in the NIR to report GHG emissions for the energy, industrial processes, agriculture, LUCF and waste sectors. In some cases, respective tables were used in parallel with the sectoral report tables annexed to the 2006 IPCC Guidelines. |
| Decision 2/CP.17, annex III, paragraph 7 | Each non-Annex I Party is encouraged to provide a consistent time series back to the years reported in the previous NCs. | Yes | The time series reported in the BUR covers the period from 2015 to 1995, including the years reported in the previous NC (NC3 submitted in 2015 covering the period 1995–2010). |

| *Decision* | *Provision of the reporting guidelines* | *Yes/partly/no/ NA* | *Comments on the extent of the information provided* |
|---|---|---|---|
| Decision 2/CP.17, annex III, paragraph 8 | Non-Annex I Parties that have previously reported on their national GHG inventories contained in their NCs are encouraged to submit summary information tables of inventories for previous submission years (e.g. for 1994 and 2000). | Yes | The BUR and NIR provide summary information tables of GHG inventories for previous submission years, covered by the first (1992–1998), second (1995–2005) and third (1995–2010) NCs. |
| Decision 2/CP.17, annex III, paragraph 9 | The inventory section of the BUR should consist of an NIR as a summary or as an update of the information contained in decision 17/CP.8, annex, chapter III (National greenhouse gas inventories), including: | | |
| | (a) Table 1 (National greenhouse gas inventory of anthropogenic emissions by sources and removal by sinks of all greenhouse gases not controlled by the Montreal Protocol and greenhouse gas precursors); | Yes | Although Togo used the 2006 IPCC Guidelines, table 1 contained in decision 17/CP.8 was also used to report the results of the national GHG inventories, but only for 2013. |
| | (b) Table 2 (National greenhouse gas inventory of anthropogenic emissions of HFCs, PFCs and $SF_6$). | Yes | Although Togo used the 2006 IPCC Guidelines, table 2 contained in decision 17/CP.8 was also used to report the results of the national GHG inventories for anthropogenic emissions of HFCs, PFCs and $SF_6$, but only for 2013. During the technical analysis, Togo provided the respective table for each year of the time series, but used zero values to report emissions instead of using the notation key "NE". |
| Decision 2/CP.17, annex III, paragraph 10 | Additional or supporting information, including sector-specific information, may be supplied in a technical annex. | Yes | The Party submitted an NIR as an annex to its BUR. |
| Decision 17/CP.8, annex, paragraph 13 | Non-Annex I Parties are encouraged to describe procedures and arrangements undertaken to collect and archive data for the preparation of national GHG inventories, as well as efforts to make this a continuous process, including information on the role of the institutions involved. | Yes | Information on the procedures and arrangements undertaken to collect and archive data for the preparation of national GHG inventories, as well as efforts to make this a continuous process, including information on the role of the institutions involved, is provided in both the BUR and the NIR. |
| Decision 17/CP.8, annex, paragraph 14 | Each non-Annex I Party shall, as appropriate and to the extent possible, provide in its national inventory, on a gas-by-gas basis and in units of mass, estimates of anthropogenic emissions of: | Yes | Estimates of anthropogenic emissions by sources and removals by sinks, on a gas-by-gas basis and in units of mass (Gg and Gg $CO_2$ eq), have been provided for 2015 back to 1995 in the BUR and in the NIR; however, some discrepancies were noted between the information reported in various tables of and annexes to the BUR and the NIR. |
| | (a) $CO_2$; | Yes | |
| | (b) $CH_4$; | Yes | |
| | (c) $N_2O$. | Yes | |

| *Decision* | *Provision of the reporting guidelines* | *Yes/partly/no/ NA* | *Comments on the extent of the information provided* |
|---|---|---|---|
| Decision 17/CP.8, annex, paragraph 15 | Non-Annex I Parties are encouraged, as appropriate, to provide information on anthropogenic emissions by sources of: | Yes | Emissions of HFCs, PFCs and $SF_6$ were reported in the BUR and the NIR as "NE". It is stated in the BUR that emissions of fluorinated gases were not estimated owing to lack of data. |
| | (a) HFCs; | Yes | |
| | (b) PFCs; | Yes | |
| | (c) $SF_6$. | Yes | |
| Decision 17/CP.8, annex, paragraph 16 | Non-Annex I Parties are encouraged, as appropriate, to report on anthropogenic emissions by sources of other GHGs, such as: | Yes | Estimates of anthropogenic emissions by sources of other GHGs, such as CO, NOx and NMVOCs, on a gas-by-gas basis and in units of mass (Gg), have been provided for 2015 back to 1995 in the BUR and the NIR; some discrepancies were noted between the information reported in various tables of and annexes to the BUR and the NIR. |
| | (a) CO; | Yes | |
| | (b) NOx; | Yes | |
| | (c) NMVOCs. | Yes | |
| Decision 17/CP.8, annex, paragraph 17 | Other gases not controlled by the Montreal Protocol, such as SOx, included in the Revised 1996 IPCC Guidelines may be included at the discretion of the Parties. | Yes | The Party reported on other gases, such as SOx, for 2015 back to 1995 in the BUR and the NIR. |
| Decision 17/CP.8, annex, paragraph 18 | Non-Annex I Parties are encouraged, to the extent possible and if disaggregated data are available, to estimate and report $CO_2$ fuel combustion emissions using both the sectoral and the reference approach and to explain any large differences between the two approaches. | Yes | Togo estimated and reported $CO_2$ fuel combustion emissions using both the sectoral and the reference approach (for 2013 only) and explained the large differences between the two approaches (they are due to the quality of the statistical data used). |
| Decision 17/CP.8, annex, paragraph 19 | Non-Annex I Parties should, to the extent possible and if disaggregated data are available, report emissions from international aviation and marine bunker fuels separately in their inventories: | | |
| | (a) International aviation; | Yes | Togo reported emissions from international aviation bunker fuels using the notation key "NE". The AD on jet kerosene consumption for category 1.A.3.i international aviation were reported for the entire time series from 2015 back to 1995; however, the emissions for that category were not estimated. |
| | (b) Marine bunker fuels. | Yes | The Party reported emissions from international marine bunker fuels using the notation key "NE". |
| Decision 17/CP.8, annex, paragraph 20 | Non-Annex I Parties wishing to report on aggregated GHG emissions and removals expressed in $CO_2$ eq should use the GWP provided by the IPCC in its Second Assessment Report based on the effects of GHGs over a 100-year time- | Yes | The Party used the GWP provided in the IPCC Second Assessment Report. |

| *Decision* | *Provision of the reporting guidelines* | *Yes/partly/no/ NA* | *Comments on the extent of the information provided* |
|---|---|---|---|
| | horizon. | | |
| Decision 17/CP.8, annex, paragraph 21 | Non-Annex I Parties are encouraged to provide information on methodologies used in the estimation of anthropogenic emissions by sources and removals by sinks of GHGs not controlled by the Montreal Protocol, including a brief explanation of the sources of EFs and AD. If non-Annex I Parties estimate anthropogenic emissions and removals from country-specific sources and/or sinks that are not part of the Revised 1996 IPCC Guidelines, they should explicitly describe the source and/or sink categories, methodologies, EFs and AD used in their estimation of emissions, as appropriate. Parties are encouraged to identify areas where data may be further improved in future communications through capacity-building: | | |
| | (a) Information on methodologies used in the estimation of anthropogenic emissions by sources and removals by sinks of GHGs not controlled by the Montreal Protocol; | Yes | |
| | (b) Explanation of the sources of EFs; | Yes | The primary sources of EFs used by the Party are the 2006 IPCC Guidelines and the *EMEP/EEA air pollutant emission inventory guidebook 2016*. To some extent, the IPCC emission factor database has also been used. The Party provided information on the EFs used sector by sector in annexes 5–7 to the BUR and annexes 11–15 to the NIR. |
| | (c) Explanation of the sources of AD; | Yes | In the BUR and the NIR the sources of AD, sector by sector, were provided (see annexes 1–4 of the BUR and annexes 7–10 of the NIR). |
| | (d) If non-Annex I Parties estimate anthropogenic emissions and removals from country-specific sources and/or sinks that are not part of the Revised 1996 IPCC Guidelines, they should explicitly describe: | NA | |
| | (i) Source and/or sink categories; | | |
| | (ii) Methodologies; | | |
| | (iii) EFs; | | |
| | (iv) AD; | | |
| | (e) Parties are encouraged to identify areas where data may be further improved in future communications through capacity-building. | Yes | Togo thoroughly identified and reported in its BUR and NIR areas where improvements could be made through capacity-building. |
| Decision 17/CP.8, annex, paragraph 22 | Each non-Annex I Party is encouraged to use tables 1 and 2 of the guidelines annexed to decision 17/CP.8 in reporting its national GHG inventory, taking into account the provisions established in paragraphs 14–17. In preparing those tables, Parties should strive to present information that is as complete as possible. Where numerical data are not provided, Parties should use the notation keys as indicated. | Yes | Where numerical data were provided in reporting tables (although only for 2013), Togo applied notation keys ("NO", "NE" and "NA"); in some cases, the notation keys were not applied consistently. |

| *Decision* | *Provision of the reporting guidelines* | *Yes, partly, no, NA* | *Comments on the extent of the information provided* |
|---|---|---|---|
| Decision 17/CP.8, annex, paragraph 24 | Non-Annex I Parties are encouraged to provide information on the level of uncertainty associated with inventory data and their underlying assumptions, and to describe the methodologies used, if any, for estimating these uncertainties: | | |
| | (a) Level of uncertainty associated with inventory data; | Yes | In its BUR and NIR, Togo provided information on the level of uncertainty associated with inventory data, but only for 2013. The level of uncertainty was estimated as 17.05 per cent and the uncertainty trend was 38.29 per cent (including AFOLU). |
| | (b) Underlying assumptions; | Yes | In the NIR, Togo provided information on the underlying assumptions used to estimate the level of uncertainty associated with the reported inventory year. The uncertainty of AD was evaluated by applying statistical analysis, considering the accuracy of the data collection process, through measurements, as well as expert judgment; while in the case of EFs, the default uncertainty values available in the 2006 IPCC Guidelines were used. |
| | (c) Methodologies used, if any, for estimating these uncertainties. | Yes | The approach 1 uncertainty analysis from the 2006 IPCC Guidelines was used for estimating the uncertainties. |

*Note*: The parts of the UNFCCC reporting guidelines on BURs on reporting information on GHG emissions by sources and removals by sinks in BURs are contained in decision 2/CP.17, paragraphs 3–10 and 41(g). Further, as per paragraph 3 of those guidelines, non-Annex I Parties are to submit updates of their national GHG inventories in accordance with paragraphs 8–24 of the "Guidelines for the preparation of national communications from Parties not included in Annex I to the Convention", contained in the annex to decision 17/CP.8. The scope of such updates should be consistent with the non-Annex I Party's capacity and time constraints and the availability of its data, as well as the level of support provided by developed country Parties for biennial update reporting.

Table 2
**Identification of the extent to which the elements of information on mitigation actions are included in the first biennial update report of Togo**

| *Decision* | *Provision of the reporting guidelines* | *Yes/partly/no* | *Comments on the extent of the information provided* |
|---|---|---|---|
| Decision 2/CP.17, annex III, paragraph 11 | Non-Annex I Parties should provide information, in a tabular format, on actions to mitigate climate change by addressing anthropogenic emissions by sources and removal by sinks of all GHGs not controlled by the Montreal Protocol. | Yes | The Party included information in a tabular format. |
| Decision 2/CP.17, annex III, paragraph 12 | For each mitigation action or group of mitigation actions, including, as appropriate, those listed in document FCCC/AWGLCA/2011/INF.1, developing country Parties shall provide the following information, to the extent possible: | | |
| | (a) Name and description of the mitigation action, including information on the nature of the action, coverage (i.e. sectors and gases), quantitative goals and progress indicators; | Partly | The information reported does not include information on the nature of the action or progress indicators. Quantitative goals were not reported for some mitigation actions. |
| | (b) Information on: | | |
| | (i) Methodologies; | Partly | Information on the methodologies for the mitigation actions was not reported. |
| | (ii) Assumptions; | Partly | Information on the assumptions for the mitigation actions was not reported. |
| | (c) Information on: | | |
| | (i) Objectives of the action; | Yes | |
| | (ii) Steps taken or envisaged to achieve that action; | Yes | |
| | (d) Information on: | | |
| | (i) Progress of implementation of the mitigation actions; | Yes | |
| | (ii) Progress of implementation of the underlying steps taken or envisaged; | No | |
| | (iii) Results achieved, such as estimated outcomes (metrics depending on type of action) and estimated emission reductions, to the extent possible; | Partly | Togo reported emission reductions for most of the mitigation actions in the energy sector. It reported emission reductions for some mitigation actions in the AFOLU and waste sectors. However, the year or period for which the emission reduction was estimated was not systematically reported. The Party did not report emission reductions for mitigation actions in the IPPU sector. |

| *Decision* | *Provision of the reporting guidelines* | *Yes/partly/no* | *Comments on the extent of the information provided* |
|---|---|---|---|
| | (e) Information on international market mechanisms. | Yes | |
| Decision 2/CP.17, annex III, paragraph 13 | Parties should provide information on the description of domestic MRV arrangements. | Yes | |

*Note*: The parts of the UNFCCC reporting guidelines on BURs on the reporting of information on mitigation actions in BURs are contained in decision 2/CP.17, annex III, paragraphs 11–13.

Table 3

**Identification of the extent to which the elements of information on finance, technology and capacity-building needs and support received are included in the first biennial update report of Togo**

| *Decision* | *Provision of the reporting requirements* | *Yes/partly/no* | *Comments on the extent of the information provided* |
|---|---|---|---|
| Decision 2/CP.17, annex III, paragraph 14 | Non-Annex I Parties should provide updated information on: | | |
| | (a) Constraints and gaps; | Yes | |
| | (b) Related financial, technical and capacity-building needs. | Yes | |
| Decision 2/CP.17, annex III, paragraph 15 | Non-Annex I Parties should provide: | | |
| | (a) Information on financial resources received, technology transfer and capacity-building received; | Yes | |
| | (b) Information on technical support received from the Global Environment Facility, Parties included in Annex II to the Convention and other developed country Parties, the Green Climate Fund and multilateral institutions for activities relating to climate change, including for the preparation of the current BUR. | Yes | |
| Decision 2/CP.17, annex III, paragraph 16 | With regard to the development and transfer of technology, non-Annex I Parties should provide information on: | | |
| | (a) Technology needs, which are nationally determined; | No | Togo did not report on its technology needs. |
| | (b) Technology support received. | Yes | |

*Note*: The parts of the UNFCCC reporting guidelines on BURs on the reporting of information on finance, technology and capacity-building needs and support received in BURs are contained in decision 2/CP.17, annex III, paragraphs 14–16.

# Annex II

## Documents and information used during the technical analysis

### A. Reference documents

"Composition, modalities and procedures of the team of technical experts for undertaking the technical analysis of biennial update reports from Parties not included in Annex I to the Convention". Annex to decision 20/CP.19. Available at http://unfccc.int/resource/docs/2013/cop19/eng/10a02.pdf#page=12.

"Modalities and guidelines for international consultation and analysis". Annex IV to decision 2/CP.17. Available at http://unfccc.int/resource/docs/2011/cop17/eng/09a01.pdf.

"UNFCCC biennial update reporting guidelines for Parties not included in Annex I to the Convention". Annex III to decision 2/CP.17. Available at http://unfccc.int/resource/docs/2011/cop17/eng/09a01.pdf.

"Guidelines for the preparation of national communications from Parties not included in Annex I to the Convention". Annex to decision 17/CP.8. Available at http://unfccc.int/resource/docs/cop8/07a02.pdf#page=2.

First biennial update report of Togo. Available at http://unfccc.int/8722.php.

First, second and third national communications of Togo. Available at http://unfccc.int/national_reports/non-annex_i_natcom/items/2979.php.

### B. Additional information provided by the Party

The following documents[1] were provided by the Party in response to requests for technical clarification during the technical analysis:

République togolaise, Etude sur les dispositions institutionnelles pour la préparation continue des communications nationales et des rapports biennaux actualisés, février 2017 (Togolese Republic, Study on the institutional arrangements for the continuous preparation of national communications and biennial update reports, February 2017)

République togolaise, Rapport sur l'évaluation des contraintes, lacunes, besoins en ressources techniques, financières et en renforcement des capacités et en transfert de technologie au Togo, juin 2017 (Togolese Republic, Report on the evaluation of constraints, gaps, needs for technical and financial resources and technology transfert in Togo, June 2017)

République togolaise, Etude sur la mise en place d'un système de mesure, notification et vérification des actions sur les changements climatiques, février 2017 (Togolese Republic, Study on the implementation of a monitoring, reporting, verification system on climate change actions, February 2017)

République togolaise, Rapport d'atténuation dans le secteur PIUP, juin 2017 (Togolese Republic, Mitigation report in the IPPU sector, June 2017)

République togolaise, Politiques et mesures d'atténuation aux changements climatiques au Togo: secteur de l'agriculture, juin 2017 (Togolese Republic, Climate change mitigation policies and measures in Togo: sector of agriculture, June 2017)
République togolaise, Politiques et mesures d'atténuation : secteur déchets, juin 2017 (Togolese Republic, Mitigation policies and measures: waste sector, June 2017)

[1] Reproduced as received from the Party.

République togolaise, Politiques et mesures d'atténuation des gaz à effet de serre au Togo : secteur énergie, juin 2017 (Togolese Republic, greenhouse gases mitigation policies and measures: energy sector, June 2017).

Tableaux d'inventaire national.

Verification des tableaux d'inventaire national.

Faire l'analyse des catégories clés pour toute la série temporelle.